

Application Serial No.:
10/016,840

Attorney Docket No.:
SP00-361

REMARKS

In view of the following remarks, favorable reconsideration of the outstanding office action is respectfully requested.

1. Rejections under 35 U.S.C. § 103

I. Item 3 of the Detailed Action

In this Item of the Detailed Action, the Examiner rejected all pending claims in the present application, namely, claims 1-4, 6, 7, 9 and 10 as being unpatentable over United States Patent No. 5,844,721 (Karpen '721) in view of United States Patent No. 5,548,491 (Karpen '491), in view of European Patent Application Publication No. 0 441 128 (EP '128), further in view of Applicant's disclosure in the application.

Applicant notes that in this Office action, the Examiner essentially repeated her prior rejections over Karpen '721 and EP '128, but further in view of a new reference, Karpen '491. Regarding this new reference, the Examiner asserted that

Karpen '491 disclose a glass, including any glass used with reflective surfaces, with a Nd_2O_3 content of greater than 5 wt% to reduce the amount of yellow light emitted by the headlight, (column 1, lines 50-57). It is preferred that the amount of Nd_2O_3 in the glass is in the range of 5-15% wt%, (column 11, lines 8-11).

The Examiner further asserted that "Karpen '491 is used to show that decreasing the amount of Nd_2O_3 in the glass to 5-15% would still provide the same benefits of improving night vision."

The rejections are substantially the same as those made in previous Office actions. Therefore, Applicant believes that the prior arguments and evidences against the rejections still apply.

I. A prima facie case of obviousness cannot be established over Karpen '721, in view of Karpen '491 and EP '128 and and further in view of the disclosure of the present application.

A proper prima facie case of obviousness requires the examiner to satisfy three requirements. First, the prior art relied upon, coupled with knowledge generally available to one of ordinary skill in the art, must contain some suggestion which would have motivated one of ordinary skill to combine references. See In re Fine, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). Second, the examiner must show that, at the time the invention was made, the proposed modification had a reasonable expectation of success. See Amgen v. Chugai Pharm. Co., 927 F.2d 1200, 1209, 18 USPQ2d 1016, 1023 (Fed. Cir. 1991). Finally,

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the combination of references must teach or suggest each and every limitation of the claimed invention. See In re Wilson, 424 F.2d 1832, 1385, 165 USPQ 494, 496 (CCPA 1970). Moreover, both the suggestion and the reasonable expectation of success must be found in the prior art, not in the applicant's disclosure. In re Vaeck, 20 U.S.P.Q.2d 1438, 1442 (Fed. Cir. 1991).

The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification. In re Fritch, 23 U.S.P.Q.2d 1780, 1783-84 (Fed. Cir. 1992). The Examiner did not, and is unable, to point to any place in Karpen '721, Karpen '491 and EP '128 where it suggests or provides a motive to modify the EP '128 glass composition to obtain the reflecting mirror comprising a sheet of an alkali metal-zinc-borosilicate glass having the composition as defined in claim 1, as previously amended. Whereas Karpen '721 discloses the rearview mirror may contain Nd_2O_3 in the amount of 5-30%, and whereas Karpen '491 discloses the glass may preferably contain Nd_2O_3 in the amount of 1-15%, they do not provide desirability to modify the EP '128 glass composition in terms of glass components other than Nd_2O_3 . While Karpen '721 teaches broadly that alkali zinc silicate glass can be used for a rearview mirror, it does not provide any teaching as to the compositional range of such glass. It is clear to one of ordinary skill in the art that within the broad family of alkali zinc silicate glass, many would not work for the intended purpose. While Karpen '491 teaches the desirability of Nd_2O_3 from 5-15%, it does not teach the desirability of Nd_2O_3 in the range from 5-10%. Further, the lowest limit of Nd_2O_3 as taught in EP '128 is 10%. Thus it would be totally unreasonable for one of ordinary skill to devise the Nd_2O_3 amount 5-10% in view of this teaching.

The glass composition recited in claims 1 and 7, are substantially different from what is disclosed in EP '128. Since the Examiner has so far chosen to ignore the differences, a side by side comparison of the glass composition and the disclosure of EP '128 is provided in CHART I below, thought it was presented many times before. Data in shaded boxes of CHART I indicate substantial difference between the glass composition of the present application and the EP '128 disclosure. Applicant repeat the distinctions following this chart in the hope that the Examiner will consider them.

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CHART I

	The present invention (%)	EP '128		
		Broadest	Preferred	Most Preferred
SiO ₂	55-70	40-60	45-60	50-55
Al ₂ O ₃	0.5-4.5	0-7	0	0
B ₂ O ₃	6-14	5-15	5-10	6-8
ZnO	3-10	0.1-10	1-7	2-5
Na ₂ O	5-11	3-8	10-15	11-13
K ₂ O	2-9	0-3	0	0
Na ₂ O+K ₂ O	7-20			
Nd ₂ O ₃	5-10	10-30	20-30	22-26
As ₂ O ₃ /Sb ₂ O ₃		0-1	0-0.5	0.2-0.4
Li ₂ O		0-3	0	0
PbO		0-15	0	0
MgO		0-3	0	0
CaO		0-3	0	0
SrO		0-3	0	0
BaO		0-3	0	0
Σ(V ₂ O ₅ +Cr ₂ O ₃ +Mn ₂ O ₃ +Fe ₂ O ₃ +CoO+NiO+CuO)		0-7	0	0
TiO ₂		0-5	0	0
Pr ₆ O ₁₁		0-1	0	0

(i) As Applicant pointed out in previous submissions, the K₂O amount of the glass composition of the present application are quite different than what is disclosed in EP '128. EP '128 prefers not to have K₂O. However, the glass composition of the glass of the present invention contains K₂O in the amount of 2-9% by weight.

(ii) As is clear from CHART I, the Nd₂O₃ level of the glass composition of the present application is substantially different from the EP '128 disclosure. The only overlapping point in Nd₂O₃ is 10% between the present application and the broadest compositional range as disclosed in EP '128. Indeed, the preferred Nd₂O₃ amount (20-30%) in the EP '128 disclosure are far beyond the glass composition in the claims of the present

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application. One of ordinary skill in the art would not and could not derive the suitable Nd₂O₃ range of 5-10% of the present application from the 10-30% range as disclosed in EP '128. Indeed, in terms of Nd₂O₃, EP '128 teaches away from the present application, if anything.

(iii) As Applicant pointed out in previous submissions, all 24 examples of EP '128 fall outside of glass composition of the present application.

Thus, whereas there is still very limited overlapping between the glass composition range of claims 1 and 7, one of ordinary skill would not be motivated to modify even the broadest glass composition range of EP '128 to obtain the glass having the composition range of the present invention as claimed. One of ordinary skill would not be motivated to combine Karpen '721, Karpen '491 and EP '128 to arrive at the invention of the present application in the claims. In addition, as mentioned *supra*, the combination of Karpen '721, Karpen '491 and EP '128 do not teach or suggest all of the claim elements of the invention of claims in the present application.

2. The evidence of unexpected results rebuts any prima facie case of obviousness.

Even assuming, *arguendo*, that the combination of Karpen '721, Karpen '491 and EP '128 could have established a *prima facie* obviousness case of the present application as claimed, which they can not, such case is rebutted by the evidence of unexpected results achieved by the present invention. *See In re Blauwe*, 736 F.2d 699, 222 USPQ 191 (Fed. Cir. 1984).

(i) The glass composition of the present application is suitable for producing thin sheet glass having a thickness of less than 0.5 mm, via, for example, the slot-draw process. EP '128, Karpen '721 and Karpen '491 do not contain disclosure as to whether the glasses of EP '128 are fit for slot-draw process. Indeed, neither of these two references suggests how to modify the glass compositions as taught in EP '128 to render them suitable for slot-draw production processes. It is the Applicant's belief that many glass compositions in the range as disclosed in EP '128 are not suitable for slot draw process. The fact that the composition of the glass is suitable for slot-draw process, whereas many a compositions disclosed in EP '128 are not, represents a substantial technical advantage of the thin sheet rearview mirror or thin sheet as claimed in the outstanding claims of the present application. This feature of the rearview mirror of the present application brought about by the composition of the glass. It

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translates to better manufacturability of the rear-view mirror. It is thus a product feature, not just a process feature!

(ii) The Nd_2O_3 in the glass of the present application tends less likely to devitrify during the glass production process. Again, the Examiner's attention is directed to comparative Example 8 of the present application, page 5. This example, featuring 11% Nd_2O_3 , falls within the broadest glass compositional range as disclosed in EP '128 but outside of the glass composition as recited in claims 1 and 7 of the present application. Paragraph [0024], page 8 of the present application discloses that Nd_2O_3 in this glass devitrifies during the production process. Therefore, Applicant has reason to believe that many glasses falling within the broadest compositional range as taught in EP '128 are not suitable for slot draw process without devitrification, this is especially true when the high Nd_2O_3 content is taken into consideration. See Declaration of Ronald L. Stewart Under 37 C.F.R. § 1.132, filed on July 3, 2003 and entered by the Examiner into the application.

The present application claims reflective mirror and glass sheet containing Nd_2O_3 doped glass having the above compositions. Thus, the technical advantages of the glass composition constitute technical advantages of the reflecting mirror and glass sheet as claimed. Again, this is a product feature of the claimed rear-view mirror of the present application. IT IS NOT JUST A PROCESS FEATURE!

For all these reasons, claims 1-4, 6, 7, 9 and 10, as previously amended, are not obvious under 35 U.S.C. § 103 over Karpen '721, Karpen '491 and in view of EP '128, further in view of Applicant's disclosure in the application.

4. Conclusion

Based upon the above remarks and papers of record, Applicant believes the pending claims of the above-captioned application are in allowable form and patentable over the prior art of record. Applicant respectfully requests reconsideration of the pending claims 1-4, 6, 7, 9 and 10 and a prompt Notice of Allowance thereon.

Applicant believes that no extension of time is necessary to make this Response timely. Should Applicant be in error, Applicant respectfully requests that the Office grant such time extension pursuant to 37 C.F.R. § 1.136(a) as necessary to make this Response timely, and hereby authorizes the Office to charge any necessary fee or surcharge with respect to said time extension to the deposit account of the undersigned firm of attorneys, Deposit Account 03-3325.

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Please direct any questions or comments to the undersigned at (607) 248-1253.

Respectfully submitted,

CORNING INCORPORATED


Siwen Chen
Limited Recognition
Corning Incorporated
Patent Department
Mail Stop SP-TI-03-1
Corning, NY 14831

Date: August 6, 2004

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Signature: Julie Henshaw
Julie Henshaw